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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,557	02/05/2002	Debarag N. Banerjee	S00-205	9864
30869	7590	12/07/2005		
LUMEN INTELLECTUAL PROPERTY SERVICES, INC. 2345 YALE STREET, 2ND FLOOR PALO ALTO, CA 94306				
			EXAMINER MARCELO, MELVIN C	
			ART UNIT 2662	PAPER NUMBER

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. ☒

10/071,557

Applicant(s)

BANERJEE, DEBARAG N.

Examiner

Melvin Marcelo

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is not clear from the specification how to use the invention. In the specification, the claimed feature of "sending a plurality of non-duplicate acknowledgements of a single packet whenever a packet is received after an out-of-order packet is received" is described as "[b]ecause each packet comprises a plurality of octet fragments, standard TCP permits multiple non-duplicate cumulative acknowledgments of a single packet" (page 7, lines 21-23). The non-duplicate acknowledgements of a single packet "are interpreted as acknowledgments of separate packets, and result in accelerated increase in window size" (page 7, lines 29-30); it is not clear how this latter 'interpretation' feature is accomplished. First of all, the non-duplicate acknowledgements are of a single packet such that while the octet fragment that is acknowledged is non-duplicative, the particular single packet is duplicatively acknowledged since it holds each of the octet fragments. It is not clear how to accomplish the "acknowledgements of separate packets" when only a single packet holds the plurality of octet fragments.

Second, the window size at the transmitting host is based on the number of unacknowledged packets (page 2, lines 11-13). It is not clear how the plurality of fragment

acknowledgements would acknowledge a plurality of packets when such fragment acknowledgements must be associated with a packet in the transmit window and only a single packet is associated with the plurality of octet fragments. In the transmit window, the single packet holding the plurality of octet fragments would be unacknowledged until all of its fragments have been acknowledged such that the window size would remain the same until the last of the fragment acknowledgements have been received. Thus, it is not clear from the specification how a plurality of non-duplicate acknowledgements of a single packet is interpreted as acknowledgements of separate packets when (1) a single packet holds each of the octet fragments and (2) the transmit window is based on unacknowledged packets rather than unacknowledged octets.

Each of the independent claims recites this feature:

1. In a data network comprising a first host, a second host, and a data connection between the first host and the second host, a method implemented at the second host comprising: a) determining whether error-induced losses or congestion-losses dominate the data connection; b) if congestion-losses dominate the data connection, using a standard transmission protocol technique for acknowledging packets; and c) if error-induced losses dominate the connection, ***sending a plurality of non-duplicate acknowledgements of a single packet whenever a packet is received after an out-of-order packet is received.***
11. A method for providing a packet transport protocol within a data communication network having a first host, a second host, and a lossy link connected to the second host, the method comprising using a standard transport protocol at the first host, and using a modified transport protocol at the second host, wherein the modified transport protocol comprises ***sending a plurality of non-duplicate acknowledgements of a single packet whenever error-induced losses dominate the data connection and a new packet is received after an out-of-order packet is received.***
16. A method for acknowledging packets in a data communications host communicating over a lossy data connection, the method comprising: if error-induced losses dominate the data connection, ***sending a plurality of non-duplicate acknowledgements of a single packet in response to receiving a new packet after receiving an out-of-order packet.***

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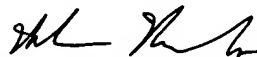
***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. None of the cited art uses non-duplicative acknowledgements of a single packet whenever a packet is received after an out-of-order packet is received during error-induced losses over a connection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Marcelo whose telephone number is 571-272-3125. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melvin Marcelo  
Primary Examiner  
Art Unit 2662

December 5, 2005